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ABSTRACT

This is the executive summary of the National Home Start Evaluation interim report. Home Start, a federally-funded 3-year (1972-1975) demonstration program home-based for low-income families with 3- to 5-year-old children was designed to enhance a mother's skills in dealing with her own children and to provide comprehensive social-emotional, health and nutritional services. Collection and analysis of data were intended to provide partial answers to three fundamental questions: Is Home Start a wise investment of public funds? How can the existing Home Start program be improved? How can future home-based programs be made most effective? Chapters include: findings and recommendations, future study issues and two Home Start family stories. (Author/MS)

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Dr. Esther Kresh, Project Officer

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# NATIONAL HOME START EVALUATION: INTERIM REPORT V

## EXECUTIVE SUMMARY

## POLICY RELEVANT FINDINGS AND RECOMMENDATIONS

October 15 1974



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## Foreword

The Office of Child Development (OCD) bears responsibility for many programs designed to benefit young children. Principal among those programs is Head Start, transferred to OCD in 1969 from the Office of Economic Opportunity.

In 1971 OCD, concerned that Head Start was limited only to those families who both wanted and were able to use a center-based program, initiated the National Home Start Demonstration Project. Operational by March 1972, the Home Start program had projects in 15 sites by mid-1973. Home Start was designed to enhance a mother's skills as teacher of her own children in her own home. In addition, comprehensive social-emotional, health, and nutrition objectives for child growth and development were adopted as part of the core program.

Concurrently with the initiation of the Home Start demonstration, OCD contracted with the High/Scope Educational Research Foundation and Abt Associates to conduct a major Home Start evaluation project running parallel with the demonstration program for three years, through June, 1975.

The research design, carefully developed by OCD, has focused on the effects of Home Start on children and mothers. Through over-recruitment it was possible to randomly select families for Home Start and for a control group not in Home Start at each of six "summative" research sites. Random selection is vital to the clear interpretation of outcome differences, but it is seldom used in large evaluations of this kind because it is so difficult to carry out.

In addition to outcome data (effects), the design required collection of data on the home visits (process), the local project staff and families (inputs), and project budgets (cost). Similar data have been collected at Head Start programs in the same locations. Collection and analysis of these data were intended to provide decisionmakers with partial answers to three fundamental questions:

- Is Home Start a wise investment of public funds?
- How can the existing Home Start program be improved?
- How can future home-based programs be made most effective?

These questions are important from a public policy viewpoint. Over the next five years, assuming no change in current initiatives, the federal government will spend through all agencies some 7.5 billion dollars on early childhood programs. Expenditures for Head Start by HEW's Office of Child Development will account for an estimated 2.5 billion, or one-third of this total. While this is a relatively minor portion (less than one-half percent) of the total estimated HEW budget during that five year period, in absolute terms the Head Start investment is of significant magnitude. We hope that the information obtained in this evaluation will assist concerned Office of Child Development officials in their constant effort to use these funds for the greatest good of the most people.

This report, transmitted to OCD 2 1/2 years after the inception of Home Start, addresses the fundamental questions raised above. It is presented in eight volumes:

- Executive Summary: Policy Relevant Findings and Recommendations (the reminder of the volume)
- Summative Evaluation Results
- Program Analysis
- Costs and Cost/Effectiveness Analysis
- Case Studies (individual project success stories)
- Summative Evaluation: Instruments
- Program Analysis: Instruments
- Field Procedures Manual

While research is scheduled to continue through the fall of 1975, this report presents statistical and analytical findings that can be used as a basis for decisions that must be made before the research effort is completed. The study team subscribes to the general principle set forth by James Coleman: ". . . partial information available at the time an action must be taken is better than complete information after that time."

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## SUMMARY FINDINGS AND RECOMMENDATIONS

This summary groups key findings and recommendations according to three central policy questions:

- Is Home Start a wise expenditure of public funds?
- How can the existing Home Start program be improved?
- How can future home-based programs be made most effective?

Brief answers are presented to each question in turn below.

### Is Home Start a wise expenditure of public funds?

YES, with respect to services currently provided in the areas of:

- child school readiness;
- child medical and dental care;
- mother/child relationship;
- mother as teacher;
- home materials for the child;
- family community involvement.

NO, with respect to services currently provided in the areas of:

- child nutrition;
- child immunizations;
- family use of existing community resources.

PERHAPS, with respect to services currently provided in the areas of:

- child social-emotional development;
- child physical-motor development.

YES, in terms of Home Start's cost/effectiveness compared to Head Start in the following areas:

- child school readiness;
- child social-emotional development;
- child physical-motor development;
- child dental care;

- mother/child relationship;
- mother as teacher;
- home materials for the child;
- family community involvement;
- use of existing community resources.

NO, in terms of Home Start's cost/effectiveness compared to Head Start in the following areas:

- child nutrition;
- child medical care;
- day care services.

NO, with respect to internal Home Start improvements in cost/effectiveness that can be made within the existing program:

- content of the home visit;
- use of staff time;
- allocation of budget funds.

How can the existing Home Start program be improved?

- Maintain full project enrollment of 80 families;
- Maintain home visitor caseloads at 9 to 13 families;
- Consistently spend 1 1/2 hours/week with each family;
- Provide bi-weekly in-home supervision of home visitors;
- Slightly decrease home visit time spent on general education;
- Increase home visit time spent on nutrition;
- Provide immediate vitamin and mineral supplements as needed;
- Arrange for necessary child immunizations;
- Provide lending books to families now having few;
- Encourage adults to read to child in lower 25% of families.

How can future home-based programs be made most effective?

- Incorporate the essential features of the existing Home Start program, including the recommended improvements above;
- Give funding priority to home-based projects where service populations are too dispersed for practical center-based operation (rural or low density urban);
- Increase program enrollment size to as near to 110 families as possible to benefit from economies of scale;

- Adjust project funding levels to regional variations in the cost-of-living index;
- Adjust salary scales for each personnel category to regional variations in the cost-of-living index;
- Avoid an overly heavy concentration of project staff or other resources in a single service delivery area;
- Employ a full time staff person specifically for in-home home visitor supervision.

I

# INTRODUCTION

## Purpose and Organization of this Executive Summary

Information in this executive summary is presented in partial answer to three broad policy issues:

- Is Home Start a wise expenditure of public funds?
- How can the existing Home Start program be improved?
- How can future home-based programs be made most effective?

The answers to these questions are addressed, in particular, to decisionmakers at the national, regional, and local levels:

- National policymakers, who must identify the best possible mixture of programs for carrying out legislative intent in serving children of the poor. They need information about the range of impacts from alternative programs, the kinds of families best served by each program, and the costs for serving each family.
- National and regional program administrators, who must decide where and how to install local projects, and then provide adequate quality control and technical assistance in helping local projects use their funds most effectively. They need information about indicators of program quality, organizational influences on quality, and optimal fund allocation.
- Local project directors, who must hire staff, train them, and support them in helping parents to become better educators of their children. Directors need information about what kind of people to hire, and what kind of resources and supervision to provide them.

In order to organize evaluation findings relating to the three broad policy issues above, a series of narrower questions about the current Home Start Demonstration Program have been formulated and addressed:

- How large is Home Start overall?
- What is the typical Home Start project like?
- Is Home Start effective for children?
- Is Home Start effective for mothers?
- Is Home Start cost/effective compared to Head Start?
- How can Home Start become more cost/effective?

Out of the answers to these specific questions will flow answers and recommendations relating to the three larger issues.

> Readers already familiar with the national Home Start program and its evaluation may wish to go from here directly to section II, the presentation of findings.

## Home Start Program Overview

Home Start is a program for disadvantaged preschool children and their families which is funded by the Office of Child Development, U.S. Department of Health, Education, and Welfare. The program started in March of 1972 and has been funded for a three-year demonstration period. Home Start is a home-based program providing Head Start-type comprehensive (nutrition, health, education, and social/psychological) services to low-income families with 3-5 year old children. A home-based program provides services in the family home rather than in a center setting.

A unique feature of Home Start is that it builds upon existing family strengths and assists parents in their role as the first and most important educators of their own children.

The Home Start program has four major objectives, as stated in the national Home Start Guidelines (December 1971):

- to involve parents directly in the educational development of their children;
- to help strengthen in parents their capacity for facilitating the general development of their own children;
- to demonstrate methods of delivering comprehensive Head Start-type services to children and parents (or substitute parents) for whom a center-based program is not feasible;

- to determine the relative costs and benefits of center- and home-based comprehensive early childhood development programs, especially in areas where both types of programs are feasible.

Presently 16 Home Start programs, funded by the Office of Child Development, are in operation. Each program receives approximately $100,000 with which to serve 80 families for a 12-month period. Participating families come from a wide variety of locales and many different ethnic and cultural backgrounds--including white, black, urban, rural, Appalachian, Eskimo, Navajo, migrant, Spanish-speaking, and Oriental.

Home Start program staff consist primarily of "home visitors", who visit the homes of enrolled families once or twice a week. In addition to working with the mother on matters of child development, the home visitors discuss nutrition, health, and social and psychological needs of family members. When needed, home visitors or other program staff refer families to community agencies for specialized services.

Families enrolled in Home Start also participate in group activities or meetings on specific topics, such as parent effectiveness or health. Each program has a policy-making council, which includes Home Start parents as members, to set policy for the local Home Start project.

Further information on the Home Start program can be found in:

"The Home Start Demonstration Program: An Overview" (February, 1973), Office of Child Development. This booklet acquaints the reader with the overall Home Start program as well as introducing the 16 individual projects.

"A Guide for Planning and Operating Home-Based Child Development Programs", (June, 1974), Office of Child Development. Based on the 16 Home Start projects, this guide details what is involved in planning and operating a home-based child development program.

## Home Start Evaluation Overview

The National Home Start Evaluation incorporates three distinct components: the formative evaluation, the summative evaluation, and the information system. The three are complementary ways of viewing the effects of Home Start. While all sites participate in the formative evaluation and information system, only six, selected as being representative of the rest of the programs, are involved in the summative evaluation.

Formative evaluation. The formative evaluation provides basic descriptive information about key aspects of individual Home Start projects. This information is used to give feedback about project implementation and to establish a context for the statistical and analytical findings. Elements of the formative evaluation include project-by-project case studies, observation of home visits, analysis of staff time-use patterns, and development of cost models. Trained interviewers gathered formative data by visiting each of the 16 projects to interview staff and to review project records. They visited the six summative sites each fall and spring, and visited the remaining 10 sites each spring.

Summative evaluation. The summative evaluation provides information about Home Start's overall effectiveness by measuring changes in parents and children. Two features characterize this kind of evaluation in the Home Start program. First, there are "before-and-after" measurements of parent and child performance along criteria provided in the Home Start Guidelines. Measures used for the evaluation include:

- Preschool Inventory
- Denver Developmental Screening Test
- Schaefer Behavior Inventory
- High/Scope Home Environment Scale
- 8-Block Sort Task
- Parent Interview
- Child Food Intake Questionnaire
- Height and Weight Measures
- Pupil Observation Checklist
- Mother Behavior Observation Scale

Second, there is a randomly assigned, delayed-entry "control" group who did not enter the Home Start program until after they participated in one complete cycle of fall and spring testing. Outcomes for these control families, who had not yet experienced Home Start, were compared to outcomes for Home Start families who had received full benefits. Control families are receiving a full year of Home Start benefits now that their "control" year is finished. Some additional comparison data were gathered from Head Start families in four sites.

Before-and-after measurements have been collected from the six summative sites each October and May. Local programs were given a full year to become operative, during which time the summative evaluation was limited to a pilot tryout of procedures. Data from the second year are presented in the current report. The data were gathered by locally hired community interviewers who received special training twice each year.

Information system. An information system, designed to gather basic statistics about each of the 16 programs, forms the third component of the national evaluation. Information is gathered quarterly on family and staff characteristics, services provided to families, and program financial expenditures. These statistics are needed to help local and national staff make better administrative decisions, to assist in the interpretation of summative evaluation outcomes, and to serve as input to the cost-effectiveness analysis of the Home Start program. The necessary information is gathered by local program staff members as part of their routine record-keeping activities; then the information is summarized into quarterly reports which are sent to national staff.

Previous evaluation reports. Further information on the national Home Start evaluation can be found in reports prepared for the Office of Child Development by the High/Scope Educational Research Foundation and Abt Associates, Inc. The following Home Start evaluation reports are available through the ERIC Document Reproduction Service (P.O. Box 190, Arlington, Virginia 22210):

- Interim Report I (August, 1972)
  1. Formative and Summative Evaluation (ED 069 439)
  1.A. Case Studies (ED 069 440)
  1.B. Case Studies (ED 069 441)

- Interim Report II (July, 1973)
  Program Analysis (ED 091 074)
  Summative Evaluation Results (ED 085 398)
  Case Studies IIA (ED 091 081)
  Case Studies IIB (ED 092 225)

- Interim Report III (August, 1973)
  Evaluation Plan 1973-1974 (ED 092 227)
  Program Analysis (ED 092 226)
  Summative Evaluation Results (ED 092 229)
  Case Study Summaries (ED 092 228)

- Interim Report IV (May, 1974; not yet in the ERIC system)
  Program Analysis
  Summative Evaluation Results
  Field Procedures Manual

Each report is based on a 6-month interval of data collection. Early reports (I, II, III) focus on the initial planning and pilot stages of the evaluation. Later reports (IV, V) present pretest and 7-month posttest results of the formal evaluation stage. Upcoming reports VI and VII will follow up Home Start families at 12- and 18-month posttest times. Recommendations about which reports are most relevant for particular questions can be obtained by calling staff in the Evaluation Branch of the Office of Child Development, DHEW (202/755-7750).

II

## FINDINGS AND RECOMMENDATIONS

Evaluation findings are presented according to their relevance to one of the following questions:

- How large is Home Start overall?
- What is the typical Home Start project like?
- Is Home Start effective for children?
- Is Home Start effective for mothers?
- Is Home Start cost/effective compared to Head Start?
- How can Home Start become more cost/effective?

Each of these questions is discussed in turn below:

### How large is Home Start overall?

- Families: in the most recent quarter Home Start served 1,150 families in 16 projects, somewhat short (90%) of the originally intended 1,280 families. There were 1,443 focal children in these families, and a total of 2,220 children in the age range 0 to 5. About 45% of Home Start families are from rural areas, compared to about 25% of Head Start families.

- Staff: 179 total staff members of all kinds in the 16 projects served the 1,150 families, for an overall staff/family ratio of 1:6.5. There were 114 home visitors among the total staff, for an overall home visitor/family ratio of about 1:10.

- Costs: between October 1973 and May 1974 the Office of Child Development spent $1,022,000, or an average of $68,200 for each local project. Total resource cost of the program (OCD's share plus community contributions) was $1,309,000 for the same period, or an average of $87,300 for each local project. For a 12 month period of full operation the average local Home Start project

would consume about $100,000 in OCD funds and about $130,000 total. These costs do not include any expenditures at the national staff level in Washington or at the HEW regional level, both of which are necessary for overall program operation.

As is typical of social service programs, Ho Start allocated slightly more than 75% of its total resources to personnel costs. Slightly less than 40% of total costs were salaries and fringe benefits for home visitors.

Site-to-site variations in project cost and resource allocations are substantial. Total resource cost at the local level would range from $89 thousand to $167 thousand on a twelve month, full-operation basis. Home visitor salaries consumed a low of 20% and a high of 42% of total budgets. The percentage of total resources consumed in the form of staff specialists, paid consultants and donated professional time ranged form 4% to 43%.

OCD expenditures for each Home Start family averaged $896 for the 8 month period. Full year OCD expenditures are projected at $1,344 on the average for each family.

What is the "typical" Home Start project like?

- Families: the typical project serves 72 families, in which the average mother is 31 years old with three children, two under age five and one older. She did not finish high school, and is equally likely to support herself or depend on the child's father for support. The family rents their home in a rural area, and jobs are so scarce that in almost 40% of the homes no family member is employed and they have to depend on welfare for support. This family will spend about a year with the program.

- Staff: the typical project has a staff of 11, including a director, a specialist (in education or health or nutrition), a home visitor supervisor, a secretary/bookkeeper, and seven home visitors.

- Director: the project director spends about half her time on administrative duties, including financial planning, enrolling families, public relations, obtaining donated resources, etc. About one day of her time is spent in staff training each week, and another day is spent in family support, including helping home visitors prepare visits. Very little time is spent in in-home contact (2 hours/week) or in staff supervision (2 hours/week).

- Specialist: the specialist shares the director's administrative duties, but spends only about one-third of her time on them. She spends considerably more time than the director on in-home contact each week (6 hours vs. 2 hours), using her specific skills in education (or health or nutrition) to help families directly. She spends one day a week on referrals and parent meetings. Much of her remaining time is spent performing tasks which make the home visitors more effective in their family contacts, such as researching, ordering, and organizing materials for home visitors to take with them; maintaining resource files; developing educational curricula; and preparing materials for staff training meetings.

- Home visitors: the typical home visitor is five years older than the mothers she serves, is a mother herself, and has completed high school and some college. She is from the same community as the families she serves and has the same ethnic background.

  The typical home visitor makes an hour and a-half visit each week to each of her 10 or so families, spending about 19 hours altogether on home visits each week. She spends an additional 11 hours each week providing family support services such as referrals (2 hours), home visit followup (2 hours), parent meetings (3 hours), and home visit preparation (4 hours). Traveling to and from families consumes about 3 hours each week; almost an entire day each week is spent in training, which includes traveling to and from a staff training meeting.

- Home visit: the typical home visit occurs once a week and lasts nearly an hour and a half. The home visitor spends about 20 minutes of this time arriving for and departing from the visit, leaving just over an hour for home visit activities. The home visitor usually spends nearly half an hour preparing in advance for each visit, and for over three-fourths of the child activities she brings the materials used.

  The content of the home visit is primarily child-oriented, but includes both school readiness activities for the child and educating the parent about the child. The home visitor chooses specific child activities for that visit either because the child likes to do them or because she feels the child needs to do them--a highly personal approach.

  In more than half of the home visits there is some discussion of things the mother has done since the last visit, and in nearly all of the visits there is a discussion of things to be done before the next visit.

During about one-third of the typical weekly visit the home visitor is involved with the mother, and during another one-third she is involved with the child. However, even when the home visitor is doing things with the child the mother is indirectly involved, because she is listening to and watching the home visitor and the child, a mode which can be quite conducive to learning. The child is usually actively involved, but when the home visitor and mother are talking to each other the child is uninvolved about half the time.

The child is the primary recipient of referral services, more of which are made for health than for any other reason. There is little time spent on nutrition during the home visit.

- In-home supervision: directors and specialists report that they accompany home visitors on family visits for supervision once a month, on the average. In projects where in-home monitoring is less frequent, either because of small staff size or an administrator's decision, directors and specialists spend more time helping home visitors prepare for their home visits; usually they either discuss individual family's problems or provide materials and ideas for the home visit.

- Costs: in the typical project personnel costs consumed 75% of the total annual budget of $130,000, leaving 25% for such non-personnel costs as travel (6% of total budget), space (5%), consumable supplies (9%), and equipment (2%). Personnel costs were divided between project staff (56% of total budget) and outside professional/nonprofessional services (19%), most of which were medical services.

## Is Home Start effective for children?

- YES, in school readiness: during their first seven months in the program Home Start children gained significantly more than the control group on three of the four school readiness measures (Table 1), including:

  -- the Preschool Inventory, a measure of children's achievement in skill areas that are commonly regarded necessary for success in school;

  -- the DDST Language Scale, a measure of children's ability to understand spoken language and to respond verbally;

  -- the 8-Block Child Talk Score, a measure of how many task-related comments children make while mothers teach them to sort four kinds of blocks into groups.

Table 1

SEVEN MONTH HOME START CHILD OUTCOMES: HOME START TO CONTROL

Analysis of covariance for spring 1974 scores,
using pretest as the covariate
(Six summative sites included)

| | Home Start | | | Control | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | Spring Mean | Adj. Spring Mean | N | Spring Mean | Adj. Spring Mean | F | p | $\omega^2$ | Summary |
| **School Readiness** | | | | | | | | | | |
| Preschool Inventory | 140 | 15.3 | 15.6 | 85 | 13.5 | 13.0 | 19.3 | <.05 | .08 | HMS>CNT |
| DDST Language | 163 | 29.6 | 29.5 | 109 | 28.7 | 28.8 | 4.1 | <.05 | .01 | HMS>CNT |
| 8-Block Child Score | 154 | 4.4 | 4.3 | 99 | 3.8 | 3.9 | 3.7 | NS | .01 | |
| 8-Block Child Talk | 167 | 2.0 | 2.0 | 115 | .4 | 1.4 | 10.5 | <.05 | .03 | HMS>CNT |
| **Social-Emotional Development** | | | | | | | | | | |
| SBI Task Orientation | 191 | 24.4 | 24.3 | 126 | 22.9 | 23.0 | 6.5 | <.05 | .02 | HMS>CNT |
| SBI Extra-Introversion | 190 | 23.7 | 23.7 | 127 | 23.5 | 23.5 | <1 | NS | .00 | |
| SBI Hostility Tolerance | 189 | 18.7 | 18.6 | 128 | 19.5 | 19.6 | 3.0 | NS | .01 | |
| POCL Test Orientation | 184 | 24.0 | 24.1 | 124 | 24.5 | 24.3 | <1 | NS | .00 | |
| POCL Sociability | 188 | 17.7 | 17.6 | 124 | 18.3 | 18.4 | 1.7 | NS | .00 | |
| DDST Personal-Social | 180 | 11.0 | 11.0 | 122 | 11.1 | 11.1 | <1 | NS | .00 | |
| **Physical Development** | | | | | | | | | | |
| Height (inches) | 187 | 41.0 | 41.1 | 125 | 41.0 | 40.9 | 1.3 | NS | .00 | |
| Weight (pounds) | 188 | 36.9 | 37.0 | 126 | 36.5 | 36.3 | 4.6 | <.05 | .01 | HMS>CNT |
| DDST Gross Motor | 144 | 11.8 | 11.8 | 100 | 11.9 | 11.8 | <1 | NS | .00 | |
| DDST Fine Motor | 175 | 12.2 | 12.2 | 119 | 12.3 | 12.2 | <1 | NS | .00 | |
| **Nutrition** | | | | | | | | | | |
| Milk Group | 192 | 1.3 | 1.3 | 130 | 1.1 | 1.1 | 5.7 | <.05 | .01 | HMS>CNT |
| Meat Group | 192 | 1.3 | 1.3 | 130 | 1.2 | 1.2 | 5.7 | <.05 | .01 | HMS>CNT |
| Egg Group | 192 | .24 | .25 | 130 | .23 | .23 | <1 | NS | .00 | |
| A-Vegetables | 192 | .09 | .09 | 130 | .10 | .10 | <1 | NS | .00 | |
| Citrus Fruits | 192 | .20 | .20 | 130 | .22 | .22 | <1 | NS | .00 | |
| Other Vegetables | 192 | 1.5 | 1.5 | 130 | 1.6 | 1.6 | <1 | NS | .00 | |
| Breads & Cereals | 192 | 3.3 | 3.3 | 130 | 3.3 | 3.3 | <1 | NS | .00 | |
| Nutrition Total | 192 | 8.0 | 8.0 | 130 | 7.8 | 7.8 | <1 | NS | .00 | |
| Vitamins | 175 | .34 | .33 | 128 | .26 | .26 | 1.7 | NS | .00 | |
| **Medical Care** | | | | | | | | | | |
| Immunization Total | 192 | 8.6 | 8.6 | 126 | 8.4 | 8.4 | 1.7 | NS | .00 | |
| Months Since Doctor Visit[1] | 188 | 4.6 | | 121 | 6.4 | | 6.3 | <.05 | .02 | HMS<CNT |
| Checkup/Something Wrong | 180 | .49 | .49 | 125 | .22 | .22 | 24.8 | <.05 | .07 | HMS>CNT |
| Been to Dentist[1] | 192 | .88 | | 123 | .17 | | 303. | <.05 | .49 | HMS>CNT |

[1]Analysis of variance on post scores.

Table 2

SEVEN MONTH HOME START MOTHER OUTCOMES: HOME START TO CONTROL

Analysis of covariance for spring 1974 scores,
using pretest as the covariate
(Six summative sites included)

| | Home Start | | | Control | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | Spring Mean | Adj. Spring Mean | N | Spring Mean | Adj. Spring Mean | F | p | $\omega^2$ | Summary |
| Mother/Child Relationship | | | | | | | | | | |
| H/S HES Mother Involvement | 184 | 10.7 | 10.6 | 120 | 9.9 | 10.0 | 6.6 | <.05 | .02 | HMS>CNT |
| H/S HES Household Tasks | 189 | 3.7 | 3.6 | 130 | 3.0 | 3.0 | 16.6 | <.05 | .05 | HMS>CNT |
| MBOS Supportive | 172 | 7.9 | 7.8 | 119 | 7.4 | 7.5 | 1.8 | NS | .00 | |
| MBOS Punitive | 174 | 5.4 | 5.4 | 122 | 5.3 | 5.3 | <1 | NS | .00 | |
| Mother as Teacher | | | | | | | | | | |
| H/S HES Mother Teaches | 175 | 3.7 | 3.7 | 125 | 3.1 | 3.2 | 7.8 | <.05 | .02 | HMS>CNT |
| 8-Block Request Talk | 167 | .55 | .57 | 115 | .46 | .45 | 1.8 | NS | .00 | |
| 8-Block Diagnostic | 165 | .91 | .89 | 112 | .57 | .59 | 9.0 | <.05 | .03 | HMS>CNT |
| 8-Block Talk About | 167 | 1.39 | 1.37 | 115 | .94 | .96 | 12.6 | <.05 | .04 | HMS>CNT |
| 8-Block Interactions/min. | 157 | 7.76 | 7.67 | 102 | 6.18 | 6.31 | 7.1 | <.05 | .02 | HMS>CNT |
| 8-Block Mean Length String | 160 | 4.7 | 4.7 | 106 | 5.0 | 5.0 | <1 | NS | .00 | |
| 8-Block Feedback | 166 | 1.4 | 1.4 | 113 | 1.2 | 1.2 | 2.1 | NS | .00 | |
| Home Materials for Child | | | | | | | | | | |
| H/S HES Books | 191 | 4.2 | 4.2 | 129 | 3.8 | 3.8 | 10.2 | <.05 | .03 | HMS>CNT |
| H/S HES Playthings | 191 | 3.9 | 3.8 | 130 | 2.7 | 2.8 | 34.1 | <.05 | .09 | HMS>CNT |
| Use of Community Resources | | | | | | | | | | |
| Welfare department | 185 | .39 | .38 | 120 | .32 | .35 | <1 | NS | .00 | |
| Food Stamps Program | 182 | .43 | .42 | 117 | .38 | .40 | <1 | NS | .00 | |
| Medicaid | 184 | .27 | .25 | 120 | .20 | .23 | <1 | NS | .00 | |
| Food commodities | 179 | .04 | .04 | 120 | .03 | .03 | <1 | NS | .00 | |
| Local hospital | 174 | .60 | .60 | 109 | .48 | .48 | 3.68 | NS | .01 | |
| Public health clinic | 177 | .62 | .61 | 115 | .61 | .62 | <1 | NS | .00 | |
| Mental health clinic | 189 | .07 | .04 | 125 | .04 | .05 | <1 | NS | .00 | |
| Family counseling agencies | 187 | .02 | .01 | 125 | .01 | .01 | <1 | NS | .00 | |
| Planned Parenthood | 186 | .24 | .23 | 113 | .18 | .19 | <1 | NS | .00 | |
| Day care program | 188 | .04 | .04 | 124 | .02 | .03 | <1 | NS | .00 | |
| Recreational programs | 191 | .10 | .10 | 124 | .06 | .06 | 1.26 | NS | .00 | |
| Legal aid program | 187 | .05 | .05 | 122 | .01 | .01 | 3.18 | NS | .01 | |
| Housing authority | 189 | .19 | .19 | 120 | .11 | .12 | 6.07 | <.05 | .00 | HMS>CNT |
| State Employment office | 177 | .07 | .07 | 119 | .03 | .03 | 2.10 | NS | .00 | |
| Job training programs | 189 | .05 | .05 | 124 | .01 | .01 | 3.14 | NS | .01 | |
| Organization Total | 167 | 5.8 | 5.8 | 115 | 5.5 | 5.6 | 6.9 | <.05 | .02 | HMS>CNT |

Table 3

SEVEN MONTH HOME START CHILD OUTCOMES: HOME START TO HEAD START

Analysis of covariance for spring 1974 scores,
using pretest as the covariate
(four summative sites included)

| | Home Start | | | Head Start | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | Spring Mean | Adj. Spring Mean | N | Spring Mean | Adj. Spring Mean | F | p | $\omega^2$ | Summary |
| **School Readiness** | | | | | | | | | | |
| Preschool Inventory | 97 | 17.2 | 17.1 | 90 | 15.3 | 15.3 | 7.4 | <.05 | .03 | HMS>HDS |
| DDST Language | 112 | 30.3 | 29.9 | 96 | 29.6 | 29.9 | <1 | NS | .01 | |
| 8-Block Child Score | 110 | 4.7 | 4.6 | 85 | 4.4 | 4.5 | <1 | NS | .01 | |
| 8-Block Child Talk | 111 | 2.2 | 2.2 | 102 | 1.8 | 1.8 | 2.9 | NS | .00 | |
| **Social-Emotional Development** | | | | | | | | | | |
| SBI Task Orientation | 132 | 24.8 | 24.9 | 110 | 24.2 | 24.1 | 1.9 | NS | .00 | |
| SBI Extra-Introversion | 131 | 23.7 | 23.9 | 110 | 23.5 | 23.3 | 1.6 | NS | .00 | |
| SBI Hostility Tolerance | 130 | 18.7 | 18.7 | 111 | 19.2 | 19.2 | <1 | NS | .00 | |
| POCL Test Orientation | 125 | 24.6 | 24.5 | 110 | 24.7 | 24.7 | <1 | NS | .00 | |
| POCL Sociability | 128 | 18.4 | 18.4 | 111 | 18.4 | 18.5 | <1 | NS | .00 | |
| DDST Personal-Social | 120 | 11.1 | 11.2 | 102 | 11.1 | 11.1 | <1 | NS | .00 | |
| **Physical Development** | | | | | | | | | | |
| Height (inches) | 128 | 41.6 | 41.5 | 110 | 41.3 | 41.4 | <1 | NS | .00 | |
| Weight (pounds) | 129 | 37.7 | 38.3 | 110 | 38.5 | 37.8 | 2.1 | NS | .01 | |
| DDST Gross Motor | 105 | 12.1 | 12.1 | 87 | 12.1 | 12.0 | <1 | NS | .01 | |
| DDST Fine Motor | 120 | 12.6 | 12.5 | 107 | 12.7 | 12.8 | 2.7 | NS | .01 | |
| **Nutrition** | | | | | | | | | | |
| Milk Group | 132 | 1.3 | 1.4 | 112 | 1.7 | 1.7 | 9.6 | <.05 | .03 | HMS<HDS |
| Meat Group | 132 | 1.3 | 1.3 | 112 | 1.3 | 1.3 | 2.0 | NS | .00 | |
| Egg Group | 132 | .27 | .27 | 112 | .17 | .17 | 6.9 | <.05 | .02 | HMS>HDS |
| A-Vegetables | 132 | .08 | .08 | 112 | .13 | .13 | 2.7 | NS | .01 | |
| Citrus Fruits | 132 | .20 | .20 | 112 | .56 | .55 | 37.9 | <.05 | .13 | HMS<HDS |
| Other Vegetables | 132 | 1.5 | 1.5 | 112 | 2.1 | 2.1 | 20.8 | <.05 | .08 | HMS<HDS |
| Breads & Cereals | 132 | 3.2 | 3.2 | 112 | 3.3 | 3.3 | <1 | NS | .00 | |
| Nutrition Total | 132 | 8.0 | 8.0 | 112 | 9.3 | 9.3 | 22.8 | <.05 | .08 | HMS<HDS |
| Vitamins | 117 | .37 | .40 | 110 | .46 | .43 | <1 | NS | .00 | |
| **Medical Care** | | | | | | | | | | |
| Immunization Total | 132 | 8.6 | 8.6 | 112 | 9.0 | 8.9 | 8.3 | <.05 | .03 | HMS<HDS |
| Months Since Doctor Visit[1] | 130 | 5.4 | | 110 | 3.8 | | 5.4 | <.05 | .02 | HMS>HDS |
| Checkup/Something Wrong | 124 | .49 | .52 | 112 | .38 | .35 | 6.7 | <.05 | .02 | HMS<HDS |
| Been to Dentist[1] | 132 | .93 | | 112 | .87 | | 3.0 | NS | .00 | |

[1]Analysis of variance on post scores.

Table 4

SEVEN MONTH HOME START MOTHER OUTCOMES: HOME START TO HEAD START

Analysis of covariance for spring 1974 scores, using pretest as the covariate

(Four summative sites included)

| | Home Start | | | Head Start | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | N | Spring Mean | Adj. Spring Mean | N | Spring Mean | Adj. Spring Mean | F | p | $\omega^2$ | Summary |
| Mother/Child Relationship | | | | | | | | | | |
| H/S HES Mother Involvement | 127 | 10.6 | 10.7 | 109 | 10.3 | 10.2 | 3.2 | NS | .01 | |
| H/S HES Household Tasks | 130 | 3.6 | 3.6 | 115 | 3.4 | 3.4 | 3.8 | NS | .01 | |
| MBOS Supportive | 116 | 7.8 | 7.8 | 86 | 7.3 | 7.3 | 3.5 | NS | .01 | |
| MBOS Punitive | 117 | 5.5 | 5.5 | 87 | 5.1 | 5.1 | 2.7 | NS | .01 | |
| Mother as Teacher | | | | | | | | | | |
| H/S HES Mother Teaches | 121 | 3.9 | 4.0 | 104 | 3.6 | 3.5 | 6.7 | <.05 | .03 | HMS>HDS |
| 8-Block Request Talk | 111 | .56 | .56 | 102 | .58 | .59 | <1 | NS | .00 | |
| 8-Block Diagnostic | 111 | .91 | .89 | 102 | .87 | .89 | <1 | NS | .00 | |
| 8-Block Talk About | 111 | 1.15 | 1.15 | 102 | 1.16 | 1.15 | <1 | NS | .00 | |
| 8-Block Interactions/min. | 103 | 7.79 | 7.54 | 89 | 7.03 | 7.33 | <1 | NS | .00 | |
| 8-Block Mean Length String | 105 | 4.5 | 4.8 | 91 | 5.2 | 4.9 | <1 | NS | .00 | |
| 8-Block Feedback | 110 | 1.3 | 1.3 | 100 | 1.4 | 1.4 | <1 | NS | .00 | |
| Home Materials for Child | | | | | | | | | | |
| H/S HES Books | 131 | 4.3 | 4.4 | 112 | 4.6 | 4.4 | <1 | NS | .00 | |
| H/S HES Playthings | 131 | 3.8 | 3.9 | 112 | 3.7 | 3.6 | 3.4 | NS | .01 | |
| Use of Community Resources | | | | | | | | | | |
| Welfare department | 126 | .21 | .21 | 110 | .29 | .28 | 2.89 | NS | .00 | |
| Food Stamps Program | 125 | .38 | .39 | 112 | .36 | .35 | <1 | NS | .00 | |
| Medicaid | 125 | .14 | .17 | 110 | .26 | .23 | 2.10 | NS | .00 | |
| Food commodities | 120 | .00 | .00 | 111 | .02 | .02 | 2.16 | NS | .01 | |
| Local hospital | 120 | .61 | .61 | 108 | .57 | .57 | <1 | NS | .00 | |
| Public health clinic | 121 | .64 | .64 | 109 | .60 | .59 | <1 | NS | .00 | |
| Mental health clinic | 129 | .05 | .05 | 112 | .03 | .03 | 1.19 | NS | .00 | |
| Family counseling agencies | 129 | .00 | | 110 | .02 | | 2.37 | NS | .01 | |
| Planned Parenthood | 127 | .25 | .25 | 108 | .22 | .22 | <1 | NS | .00 | |
| Day care program | 129 | .03 | .11 | 109 | .63 | .54 | 73.82 | <.05 | .24 | HMS<HDS |
| Recreational programs | 131 | .08 | .09 | 112 | .15 | .14 | 1.48 | NS | .00 | |
| Legal aid program | 128 | .02 | .02 | 110 | .01 | .01 | <1 | NS | .00 | |
| Housing authority | 131 | .11 | .16 | 111 | .20 | .14 | <1 | NS | .00 | |
| State Employment office | 121 | .10 | .10 | 110 | .10 | .10 | <1 | NS | .00 | |
| Job training programs | 129 | .05 | .06 | 112 | .05 | .05 | <1 | NS | .00 | |
| Organization Total | 114 | 5.9 | 6.1 | 105 | 6.2 | 6.0 | <1 | NS | .00 | |

Gains on the fourth measure--the 8-Block Placement Score, which indicates whether or not a child learned to sort the blocks correctly--favored the Home Start children but were not statistically significant.

Since Home Start's philosophy is to assist mothers to become better teachers of their children, rather than to assist children directly, a relationship between child gains and mother gains is expected. Regression methods were used to test for this relationship, and it was found that children of mothers who reported teaching more elementary skills gained the most in school readiness ($t=2.00$; $p<.05$). This result supports the interpretation that a child's school readiness is favorably affected by improvements in a mother's teaching behavior, and affirms the fundamental correctness of Home Start's central philosophy of helping mothers become better educators of their children.

In an additional analysis using school readiness data, home visitor background characteristics such as age, education, and socio-economic level were found to have little influence on child outcomes.

- PERHAPS, in social-emotional development: with but one exception there were no statistically significant differences in growth between Home Start and control children on the social-emotional measures (Table 1). The lone exception, SBI Task Orientation scale, measures the child's ability to become involved in tasks for extended periods of time, and in many ways is more closely related to school readiness than to characteristics normally thought of as social-emotional skills.

  This lack of differences need not be interpreted as a negative finding, because it is not fully clear that differences were expected--especially in the short period of only seven months. In addition, child social-emotional growth is notoriously difficult to measure with available tests, and the lack of differences may be due to imprecise techniques.

- PERHAPS, in physical development: no differences in either fine or gross motor development were found (Table 1) but none were expected since children appeared relatively normal in that area and program staff placed relatively little emphasis on physical motor development compared to their emphasis on school readiness.

  Home Start children gained significantly more weight than control children (Table 1), indicating changes but not necessarily improvements in eating patterns. Changes in height were not expected in seven months because of its

resistance to short-term change. Home Start and control children are below national norms in both height and weight.

- NO, in nutrition: there was no improvement in Total Nutrition Scores among Home Start children compared to control children (Table 1). Two of the subscores (Meat and Milk) indicated statistically significant improvements for Home Start children. The increase for milk, however, which is critical because of the importance of calcium to proper bone growth (consequently to proper height), was minute compared to the amount needed to reach satisfactory levels. No increase was found in the number of children taking vitamin supplements.

  Children's diets appeared seriously deficient in foods containing calcium, iron, vitamin A, riboflavin, and vitamin C when they entered Home Start, and since the program had no effect, their diets remain seriously deficient. This problem indicates a need for immediate changes in the existing Home Start program to help currently enrolled families improve their diets before the program ends next summer.

- YES, in child medical care: significant improvements were observed for Home Start children on three out of the four gross indicators of medical care reported by mothers: months since last doctor visit, reason for last visit (preventive or remedial), and has child been to a dentist (Table 1). Results indicated that Home Start children had been to a doctor more recently than had control children, and more likely for preventive reasons. The impact for getting Home Start children to dentists was so great that it is almost possible to generalize by saying that Home Start children have been to a dentist (89%) and control children have not (17%).

  No improvement was found in the number of essential immunizations Home Start mothers reported their children had received (Table 1). Since between 10% and 15% of the children have not had all essential immunizations it should be a matter of high priority to arrange for their administration.

Is Home Start effective for mothers?

- YES, in mother/child relationship: two mother self-report measures that are assumed to reflect aspects of the mother/child relationship showed statistically significant differences in favor of Home Start mothers (Table 2):

  -- the H/S HES Mother Involvement Scale, a measure of how often mothers spend time with their children in games, pleasant conversation, and other activities children like;

-- the H/S HES Household Tasks Scale, a measure of how often children "help" their mothers with some simple household tasks, thought to reflect the child's integration into his mother's daily world.

These findings imply improved mother and child relationships for Home Start families, which are likely to enhance the children's social-emotional growth.

- YES, for mother as teacher: on the "mother teaches" scale Home Start mothers reported teaching significantly more elementary reading and writing skills to their children than control mothers reported teaching to theirs (Table 2). In addition, while teaching "height" and "mark" to their children as part of the 8-Block Task, they were observed to use significantly more teaching requests of the kind likely to get children thinking about the task; they talked about task-relevant dimensions significantly more often; and they had more verbal interactions per minute with their children during the task than did control mothers (Table 2). There were no significant differences between Home Start and control mothers in the amount they requested task-specific talk, in the average number of uninterrupted comments, or in the frequency mothers provided feedback to their children about comments and placements, although the directions of the differences were favorable to Home Start mothers in each case (Table 2).

  A central objective of the Home Start program is to help mothers become the best teachers of their children they can, and these findings show that the program has had a clearly favorable impact on the teaching behaviors of Home Start mothers. This conclusion is particularly important, since it means that an essential link in the direction of long range program impact has been established. It appears that mothers are now extending help to their children in areas where most of them previously deferred to school teachers. This help to children occurs in between home visits, without any direct staff contact, greatly increasing the program's impact. More importantly, the mother's improved teaching skills can potentially influence younger siblings after the family is no longer enrolled in the program, providing benefits to new children at no additional program cost.

- YES, in home materials for the child: both of the mother self-report scales reflecting home materials for the child were statistically significant in favor of Home Start over control (Table 2):

  -- the H/S HES Books Scale, a measure of how many children's books are in the home, and how often someone reads stories to the children;

-- the H/S HES Playthings Scale, a measure of how many of some common, ordinary playthings most children like are in the home.

These findings are an important addition to those of the previous section because they add another dimension to the idea of "mothers as educators". A mother can become a better educator by teaching new things to her child, and by interacting with her child in new ways, but she can also become a better educator by constructively shaping the child's material environment. In so doing she can exert her positive influence even at times when she is not directly involved with her child.

The observed Home Start impacts from this and the mother-as-teacher measures also help explain the large school readiness differences appearing at the end of the first seven months between Home Start and control children.

Although a clear early impact has been obtained, for most of these common home materials considerable improvement is still possible among Home Start families. For example, Home Start staff can provide children's books to the 22% of mothers who said they had three or fewer books in the home, and they can encourage the 26% who seldom read to their children to read more often.

- NO, in use of community resources: mothers were asked which of 15 community resources they were now using, some of which included: public health clinic, state employment office, welfare department, housing authority, job training programs, etc. Only one of the 15 (housing authority) was statistically significant between Home Start and control families, with Home Start families using it more frequently (Table 2). It appears, then, that the Home Start program has had little impact helping families use existing community resources, one of the most important objectives in the Home Start Guidelines. It is not clear whether the failure was due to the unavailability of these resources, the ineligibility of families for services, the current provision of services to all eligible families, or the ineffectiveness of the Home Start program. It seems clear, however, that for whatever reason the program has failed to achieve an important objective.

- YES, in community involvement: Home Start mothers reported that their family members belonged to significantly more organizations than control mothers reported theirs belonged to (Table 2). The organizations included: parent-teacher organization; boy scouts, girl scouts, 4-H club, or other youth group; church organization or social club; and political organization. This finding might be taken to indicate that progress is being made in reducing the community isolation that characterizes many of the Home Start families.

Is Home Start cost/effective compared to Head Start?

- YES, Home Start is effective compared to Head Start: with few exceptions the Home Start accomplishments of the first seven months kept pace with Head Start accomplishments during the same period (Tables 3 and 4). The primary differences between the two are in the areas of nutrition, medical care, and use of day care, in all of which Home Start was lower, and things mothers teach their children, in which Home Start mothers were higher. For the most part, then, Home Start can be viewed as delivering services which are comparable to those in the Head Start program.

- YES, Home Start costs are comparable to Head Start costs: a comparison of the cost of the Home Start program per family served with the cost of the Head Start program per child served indicates that unit costs are somewhat lower for the Home Start program.

  The OCD expenditures for Home Start and Head Start projects in four sites--Alabama, Arkansas, Texas and West Virginia--suggest that the federal government spends less per family enrolled in the Home Start program than it spends per child enrolled in the Head Start program (Table 5). For the 8 month period, October 1973 to May 1974, OCD spent $917 per Home Start family and $1,175 per Head Start child. Estimated 12-month expenditures, obtained by scaling 8-month figures by a factor of 1.5, are $1,376 for Home Start and $1,763 for Head Start. On the basis of these estimates of annual cost, for each $1.0 million of federal funds OCD could provide either 727 families with twelve months' worth of the kinds of benefits a Home Start project provides, or 567 children with twelve months' worth of the kinds of benefits a Head Start project provides.

- YES, Home Start is cost/effective compared to Head Start: available evidence indicates that Home Start is not significently less effective and not significantly more costly that Head Start as a mechanism for achieving the objectives which the Home Start program was designed to achieve.

Table 5

COMPARISON OF UNIT COSTS FOR
THE HOME START AND HEAD START PROGRAMS

(period covered: 10/1/73 - 5/31/74)

| | HOME START | | HEAD START | |
|---|---|---|---|---|
| SITE | # FAMILIES | OCD EXPENDITURES PER FAMILY | # CHILDREN | OCD EXPENDITURES PER CHILD |
| ALABAMA | 84 | 829 | 124 | 1,648 |
| ARKANSAS | 86 | 762 | 182 | 728 |
| TEXAS - HOUSTON | 74 | 681 | 1,500 | 1,165 |
| WEST VIRGINIA | 80 | 1,076 | 179 | 1,376 |
| AVERAGE | 81 | 917 | 496 | 1,175 |

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The findings reported here should not be used to argue that Home Start, in general, is a more cost/effective program than Head Start. Although the two programs are substitutes for each other in some service delivery areas (notably in the area of school readiness), there are other areas in which the two programs overlap very little or not at all. For example, there is more of a focus on the development of parent teaching skills in Home Start than in Head Start. In contrast, one of the important indirect services provided by Head Start--day care services for mothers who work--is a product Home Start cannot be expected to provide since the presence of the mother is an essential ingredient in the home visit process. Because benefits provided by the two programs do not always overlap, the relative cost/effectiveness of the two programs cannot be judged by comparing unit costs alone.

An additional factor to be considered when weighing the benefits of one program against those of the other is the social value of permitting parents a choice between Home Start and Head Start. This consideration would suggest a need for keeping both programs available as options, as currently being done in the home-based option selected for implementation by more than 200 Head Start programs.

How can Home Start become more cost/effective?

The Home Start program is currently entering its third year of operation. In any organization, especially in an organization still in its infancy, there exists potential for improvement in efficiency. There are several areas in which the cost/effectiveness of the existing Home Start program can be improved: the content of the typical home visit, the use of staff time, and budgetary control.

- Slightly decrease home visit time spent on general education: Available evidence indicates that the existing heavy emphasis placed on general education in the typical home visit may not be cost/effective. The amount of time spent on general education could be reduced without adversely affecting either child gains on school readiness or mother gains as an educator of her child.

Analysis of child performance on the Preschool Inventory and the DDST Language scale--both measures of school readiness--suggests that there is no statistically significant relationship between the amount of time devoted to the child's general education and measured gains in school readiness when other determinants (e.g., pre-test scores) are held constant. A similar analysis of mother's performance on measures of her teaching involvement indicates no statistically significant relationship between home visitor time devoted to developing mother teaching skills and outcome measures of those skills. The absence of such time-to-outcome relationships suggests that some reduction in emphasis on general education would not adversely affect the school readiness gains and mother teaching gains recorded by Home Start families.

- Increase home visit time spent on nutrition education: Nutrition is not being dealt with effectively within the typical home visit. In general, little time has been spent on this important content area according to the home visit observation results. Moreover, the time that was spent made little difference according to the summative findings. In addition to spending more time, special assistance should be provided to home visitors in the area of nutrition education, and someone with special training in nutrition should occasionally accompany home visitors in the field.

- Provide bi-weekly in-home supervision of home visitors: to maximize the cost/effectiveness of the typical home visit more seems to be necessary than simple changes in the time spent on various content areas within the home visit. Field supervision of home visitors, currently quite low in many sites, should be increased and should focus on the content of home visitor to family interaction.

While statistical results suggest that the current focus of the typical home visit is not as cost/effective as it could be, the results do not suggest what the optimal home visit should be. In fact there is no optimal home visit; no particular approach would work for all home visitors and for all families. In-field supervision of home visitors and the use of specialists to occasionally accompany home visitors in the field are the two techniques which appear flexible enough and powerful enough to improve the effectiveness of the home visit process.

- Assign to one staff member the prime responsibility of home visitor field supervision: the degree of home visitor supervision across Home Start projects depends largely on the presence of a staff member whose primary responsibility it is to provide such supervision.

  The degree of supervision of home visitors varies substantially across local projects. Both the amount of time spent on and the frequency of home visitor supervision are highly correlated with the presence of a staff member who is primarily responsible for field supervision of home visitors. A project director alone has too many administrative responsibilities to provide adequate in-field supervision of home visitors. The availability of additional core administrative personnel not primarily responsible for supervision (assistant directors, educational coordinators and social service coordinators) does not, per se, guarantee adequate in-field supervision.

- Consistently spend 1 1/2 hours per week with each family: there is evidence that family development declines significantly when contact time between the family and the home visitor falls below about an hour and half or two hours per week. In five of the sixteen local Home Start projects average contact time is currently below this cost/effective range. There is no evidence to suggest that substantial increases in contact time beyond two hours produce significantly better family achievement.

- Maintain home visitor caseloads at 9 to 13 families: assignment of fewer than 9 or more than 13 families per home visitor does not appear to be cost/effective.

  The average caseload of home visitors is currently 10 families, but caseloads range from a low of 6 to a high of 20 families per home visitor. Data on home visitor time use suggest that those home visitors with caseloads in excess of 13 families had difficulty maintaining an hour and a half average contact time per family per week. In contrast, there is no evidence to suggest that home visitors with caseloads of less than 9 families were more successful in achieving family development than those with caseloads of 9-13 families. Since contact time with families varies substantially even for home visitors with 9-13 family caseloads, optimal caseloads, per se, do not guarantee optimal contact time with families.

- Adjust salary scales to regional variations in the cost-of-living index and to local labor market conditions: salary differentials across and within local projects are too large to be explained in terms of differentials in staff effectiveness or regional variation in the cost-of-living index. In addition, average weekly salaries of home visitors are substantially below the average weekly budget of low income families at every Home Start location.

  The average home visitor is currently paid a salary which provides less than 70% of a low income standard of living. This percentage varies substantially across Home Start projects, from a low of 52% to a high of 85%. Differentials in salary scales within sites for different categories of personnel also vary substantially from one Home Start project to another. Home visitors at one project, for example, receive an average salary equal to almost 90% of the director's salary at that project; at another site the average home visitor is paid the equivalent of only 37% of the project director's salary. These site-to-site variations in the ratios of home visitor salaries to low income budgets and to other staff salaries are excessively large, and cannot be explained by regional cost-of-living variations, by site-to-site differences in home visitor effectiveness, or by irregularities in local labor market conditions.

- Avoid an overly heavy concentration of project staff in a single service delivery area: there is substantial variation across Home Start projects in the number of staff employed per family in various service delivery areas. While local projects should be encouraged to experiment with alternative service delivery models, an overemphasis on any particular delivery area is not likely to produce a cost/effective result for a program mandated to provide a wide variety of services to families.

  Certain local projects employ staff specialists whose training and responsibilities are heavily concentrated in a single service area. One project employs a speech therapist, an educational therapist, and two educational aides but no nutritionist or social service coordinator. Another program employs two social service coordinators and a nurse but no educational specialist. Several programs employ no staff specialists at all. These differences suggest that local projects will not achieve the same level of family development in all service areas.

As additional resources are devoted to achievement of a particular objective, a point is ordinarily reached at which further increases in the quantity of resources delivered leads to smaller increases in results. This suggests that a heavy concentration of Home Start resources in one service delivery area may not be cost/effective--in the sense that some of those resources would yield a higher return were they devoted to a different service delivery area. Also, as described in the original Home Start Guidelines, the Home Start program is designed to deliver a wide variety of services to families. An overly heavy concentration of resources in one particular service area to the exclusion of others is not consistent with the original philosophy of the Home Start program.

- Increase project enrollment to at least 80 families: there is convincing evidence that program cost per family served can be substantially reduced by increasing family enrollment at least to the level set in the original guideline of 80 families per project, and to about 110 families in future home-based programs.

Analytical work with model budgets for hypothetical projects indicates that, while program costs do increase as project enrollment rises, there are economies of scale at work which cause cost per family served (unit cost) to decline. This is an extremely important finding because it indicates that the Home Start program can reach a larger number of families for a given level of funding by maintaining maximum feasible enrollment at each Home Start site.

Such a policy, actively pursued, would substantially increase the cost/effectiveness of the program. Results obtained from analysis of model budgets suggest that an increase in enrollment from 50 to 80 families would reduce unit cost by $259 per family in an average urban site and $356 per family in an average rural site; a further enrollment increase to 110 families would produce an additional unit cost decline of from $73 (rural) to $182 (urban) (Table 6).

Since rural home-based projects can provide services for less per family than urban home-based projects (Table 6), it would appear more cost effective to give first priority to rural sites when funding new projects. Moreover Head Start projects are less suited for rural sites because of the prohibitive bussing costs, another reason for giving priority to home-based projects in rural sites.

## Table 6

### MODEL BUDGETS FOR URBAN/RURAL HOMESTART PROJECTS

(12 months of full operation;
based on Autumn 1973 prices)

| ITEM | 50 FAMILIES | | 80 FAMILIES | | 110 FAMILIES | |
|---|---|---|---|---|---|---|
| | URBAN | RURAL | URBAN | RURAL | URBAN | RURAL |
| Personnel | 71,486 | 66,959 | 102,071 | 87,004 | 125,611 | 116,846 |
| Project Staff | 65,986[1] | 61,959[1] | 95,571[2] | 81,004[2] | 118,111[3] | 109,846[3] |
| Paid Consultants | 5,500 | 5,000 | 6,500 | 6,000 | 7,500 | 7,000 |
| Non-Personnel | 19,000 | 19,000 | 22,000 | 22,000 | 25,000 | 25,000 |
| TOTAL - OCD | 90,486 | 85,959 | 124,071 | 109,004 | 150,611 | 141,846 |
| Community Contribution | 9,049 | 8,596 | 12,407 | 10,900 | 15,061 | 14,185 |
| TOTAL BUDGET | 99,535 | 94,555 | 136,478 | 119,904 | 165,672 | 156,031 |
| COST PER FAMILY | | | | | | |
| OCD | 1,810 | 1,719 | 1,551 | 1,363 | 1,369 | 1,290 |
| TOTAL | 1,991 | 1,891 | 1,706 | 1,499 | 1,506 | 1.4[illegible] |

[1] Project staff: 4 home visitors with caseloads of twelve families; one director; one supervisor/coordinator (supervises 4 home visitors and works as home visitor with two families); one 3/4-time nurse/nutritionist; one secretary/bookkeeper.

[2] Project staff: 8 home visitors with caseloads of ten families; one director; one supervisor/coordinator (supervises 8 home visitors); one full-time nurse/nutritionist; one secretary/bookkeeper.

[3] Project staff: 9 home visitors with caseloads of twelve families; one director; two supervisor/coordinators (one supervises 5 home visitors; the other supervises 4 home visitors and each works as a home visitor to one family in addition); two 3/4-time nurse/nutritionists; one secretary/bookkeeper.

- Adjust project funding levels to regional variations in the cost-of-living index: existing OCD policy is to provide the same level of funding to all local Home Start projects, regardless of enrollment levels and regardless of the local cost-of-living index. This policy produces site-to-site differentials in the ability of projects of different sizes and in different cost-of-living areas to provide services to local families. If funding levels at all sites are set at the level appropriate for a project with an average number of families in an average cost-of-living area, then projects with more families and projects in higher-cost areas will have to curtail services per family. Projects with fewer than average families or projects in areas where the costs are low have the options of delivering more services per family, increasing salary scales or reducing efforts to supplement OCD funds with community contributions.

  A policy of tailoring the amount of federal funds provided to each Home Start project to enrollment levels and the local cost-of-living would provide several advantages that are not available under the existing policy of equal funding to all sites. It would, first, eliminate the disincentive to recruit a larger group of local families that exists under the existing equal-funding policy; second, more nearly equalize in-kind income transfers per family across local projects; and third, increase the number of families that can be served by the Home Start program for a given level of national appropriations.

III

# FUTURE STUDY ISSUES

The findings of the National Home Start Evaluation Study to date indicate that the Home Start Program is an important, cost/effective innovation in the area of early childhood intervention. Research in two areas which are beyond the scope of the current evaluation study may demonstrate that the program's cost/effectiveness is far higher than existing evidence shows. These two study areas are:

- the continuity of Home Start treatment on parents-as-educators as they work with younger siblings of focal children;
- the continuity of effects over time on Home Start children who have gone on to public schools.

Each of these possible study areas is discussed briefly below.

Home Start is essentially intended as a child-centered "teacher training" program for parents. Home Start, therefore, has potentially far greater spread-of-effects than most previous early childhood intervention programs, which focused primarily on children. This spread-of-effects is likely to occur in two areas. The first is the possible impact of the program on adults who come in contact with a Home Start focal parent, and indirectly on the children of these other parents. More important and worthy of careful study is the impact of changes in a focal parent's child development skills on other siblings in the family, particularly those of preschool age. If it can be demonstrated that there are substantial gains for the siblings of focal children via the "parent-as-educator," and independently of the program, then not only is the primary Home Start objective proven but the established cost/effectiveness of the program would dramatically improve.

Perhaps even more important is the determination of the long-term impact of Home Start on focal children as they move into kindergarten and first grade. It can be hypothesized on the basis of past preschool studies that the only conditions under which preschool intervention gains can be maintained are those in which continuing and appropriate parental support is present. Home Start is the only major national intervention program in which the program model would predict sustained parental support as children move into public education. If the gains of Home Start hold up (Home Start vs. control) during kindergarten and longer, the impact on the direction of public early childhood education policy would be profound.

These points are raised here because if either or both directions warranted action, steps could be taken during the final study year to lay the groundwork for further study.

IV

## TWO HOME START FAMILY STORIES

While examining all the statistics and generalities presented in the previous sections, it becomes very easy to forget that the main thrust of Home Start is simply people helping other people. To recover this more human view of Home Start we are closing the executive summary with two real-life descriptions of families who have been helped by home visitors during the past year. They poignantly illustrate some of the ways concerned individuals have affected the happiness and wellbeing of families in the Home Start program. Both were selected from the volume of case study updates submitted as part of this report.

### THE LEFEVRE FAMILY

"I'm not trying to take credit for Home Start, because perhaps anybody who had really listened to Annette could have helped her," says Deputy Director Hannah McCarthy. Annette, 40, lived with four of her children in a Binghamton, New York housing project, and although she had many boyfriends, she was increasingly depressed. Her apartment was dirty and disorganized, her teenagers were into drugs, and one boy had tried to commit suicide.

"Annette had a very unfortunate background. She has had two or three children out of wedlock and had very little interaction with her children in a meaningful way," Home Visitor Terry Oakland reports. Four-year-old Libby, Home Start's focal child, bore the brunt of Annette's frustration and was frequently bruised in the process. "She was screaming at the child -- really screaming," Terry recalls, "and the child was terrifically intimidated and was responding out of fear rather than cooperation. When I took over the family in January, she told me this was the only way you could treat kids."

"Whenever I'd make any suggestions to her about child discipline, she'd just discount everything I'd say because she felt it didn't relate to her at all. She didn't really need me to come in and tell her these things. But as we talked and got to discuss her problems and she came to have more confidence in me, she'd listen more and more. Just two or three months ago, she came to the conclusion that there were other ways of dealing with children than by severe discipline, and it was really a big step forward."

Terry and Hannah McCarthy both worked to gain Annette's confidence by listening, by being supportive, and by helping

improve the physical and psychological environment in the Lefevre household. "After awhile," Hannah says, "when the Visitor went there, Annette began to want to read things. We gave her things on child care, and she loved improving her vocabulary -- using new words really made her feel good." Annette also began getting out of the apartment, meeting her neighbors and dropping in at Home Start. Her self-improvement and the intelligence she's always had led her to new friends and, according to Hannah, "a different type of man."

"Last December," says Terry, "she met a man with whom she could have a meaningful relationship. We discussed that marriage would be difficult for her and for him also, because he had never been married before and they both had the habit of being independent. She came to the conclusion that she wanted him to make the decisions and be the authoritarian figure in the home. I felt this was good, for her to be able to give this responsibility to another person. She'd gotten to the point where she had borne the burdens of being a single parent for such a long time that she was ready to turn the reins over to someone else." Her fiance, a devoutly religious man, happily accepted the responsibilities of a new family. "She married him two months ago, and it really made me feel great. She planned her own wedding, she made her own clothes and the attendants' clothes -- she worked very, very hard on it."

The family moved into Annette's father-in-law's home, and because he had recently had a heart attack, Annette took right over. "She takes care of him just like he's the greatest," Hannah says. "The children are in a nice home, and they're doing well." Terry agrees: "Libby is a delightful little girl, she really is, and the mother works beautifully with her now in the projects I take. They really have a good time together. Annette has accepted a great deal of responsibility for our Mother's Group meetings, and she's worked on the Parent Policy Board. She has really taken an active part in Home Start.

"Annette is really an intelligent person. I think Home Start helped her to be more objective about herself and about what she wanted for herself. Talking with her about the different phases of her life and her problems helped her realize that there was something in life beyond what she was experiencing."

Annette herself puts it this way: "I wouldn't go out of my home; finally I gave it a try, and found I really liked it. It got me out of my own shell, got me talking to other mothers, and it helped my mental outlook. Home Start is a two-way thing: it's very good for the children, and it's good for me to find that my own problems aren't that earthshaking. It's changed my attitude toward working with my children."

THE BIXBY FAMILY

When Will and Cindy Bixby and their two children moved to Neguassa, near Franklin, they had recently joined Home Start and were assigned Home Visitor Connie Smith. "Robbie didn't talk at all," Cindy says, referring to her older child, who was four at the time. Cindy seldom got out of the house and spent much of the day watching television, dealing with Robbie and two-year-old Dana only when necessary. According to Connie, "she didn't talk with the kids or work with them at all -- she really didn't understand that she should." Untreated emotional and physical problems combined to make her lethargic and absent minded -- she seldom swept the floor or bathed the children.

To reach this family, the Home Visitor had to drive twenty-five miles through the mountains, over dirt and rock wagon roads. The house had been condemned and debris in the well made the water unusable. It was a couple of months before it could be cleaned out and the water declared safe by the health department. In the meantime, the family hauled water. "It was terrible," Connie recalls. "The house was almost down, and they had big rats. The kids were bitten. I gave them a couple of cats to get rid of the rats, and that solved that problem, I think. But it was no place to bring up children."

The Macon Program for Progress which sponsors Home Start offers a variety of services, and one of them is self-help housing. Connie got the Bixbys interested and then sent a representative to explain the program. The family decided to join and were soon working on a home of their own. Problems cropped up along the way: Will was hurt on the job and was unable to work. "I worried about the children -- they didn't have any food and they hadn't been getting food stamps. I'd talked to Cindy about it," says Connie, "but they just hadn't gathered the information they needed to get stamps." Connie helped them apply for the few months' assistance they needed. Money got so tight in the household that the Bixbys couldn't pay their light bill and were afraid they'd be cut off. "We discussed it", Connie recalls, "and neighbors made up the money." A few months ago, after a year of work, the Bixbys moved into their own, self-help home -- "a beautiful house."

While the building was underway, Connie was working with Robbie whose slow speech development was a cause for concern. She arranged to have her evaluated at Western Carolina University 25 miles away in Cullowhee: "They told us that she needed to be talked to, and we got the mother to do this. The child by no means talks well yet, but you can understand a lot of the things she says. She works with her now a lot, and it shows. Director Esther Cunningham agrees: "I can testify how far they've come. The last time they went to the dentist, the mother was talking with me, the two little girls were talking with me, and we were singing and playing games as we went up the road."

In addition, both mother and children had health problems which needed prompt attention. With the Home Visitor's help, heart murmurs were identified, prescriptions for eye glasses were filled and measures were taken to correct the young mother's anemia.

In addition, both mother and children had health problems which needed prompt attention. With the Home Visitor's help, heart murmurs were identified, prescriptions for eye glasses were filled and measures were taken to correct the young mother's anemia.

Cindy needed a chance now and again to get out of the house, but like many men in this region, Will disapproved of his wife having an active social life. As he got to know Connie and came to accept Home Start, he softened his stand and Cindy is now attending parent meetings, picnics, and other program events. "He's more willing for her to go now," Connie feels, "to get out and do things and mix with other people, which is good for her. She was really withdrawn and depressed. It helped her to see other children and their parents and see that you <u>can</u> work with your own children."

By putting the Bixbys in touch with local agencies like food stamps, self-housing and others and by showing them how to obtain health care and social services, the program feels it has accomplished one of its most important goals, to help families to future independence. "They know now how to contact other agencies for help, even though we won't be there," says Esther Cunningham.

Cindy Bixby feels Home Start has made a difference. "It's helped Robbie and me," she states. How? "Well, Robbie talks now," she says simply. For Robbie, who'll go to school next year, that's quite a difference.